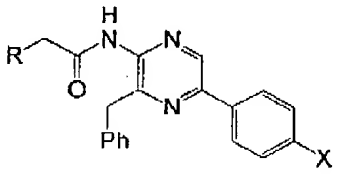
XIII. Identification of the produce excited states during the chemiluminescent and bioluminescent oxidation of Renilla (sea pansy) luciferin and certain of its analogs," *Biochemistry*, (1973), 12(22), 4463-8).

The rejection is traversed.

As the reference is understood, Hori teaches a series of 2-(acetamide)-3-benzyl-5-(*para*-substituted-phenyl)-pyrazine compounds. That is, Hori recites compounds of the formula:



wherein X is hydroxy or methoxy and R is hydrogen or phenyl.

Thus the compounds recited by Hori have a benzyl residue at the position corresponding to the R_1 position of the formulae of rejected claims 3-8. Applicants note that the R_1 position of claim 6 cannot possibly read on benzyl, being limited by the explicit language of that claim to hydrogen, halogen, methyl, ethyl, ethoxy or methoxy.

In contrast, compounds provided by claims 3-5 and 7-8 have an R_1 substituent selected from the group consisting of H, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, halogen, C_{1-4} haloalkyl, trifluoromethyl, trifluoromethoxy, -NH(C_{1-4} alkyl), -N(C_{1-4} alkyl)(C_{1-4} alkyl), -O(C_{1-4} alkyl), and S(O)$_n$(C_{1-4} alkyl).

Thus, for certain compounds within the scope of claims 3-5 and 7-8, R_1 is C_{1-4}alkyl. The Examiner points to this scope and to excerpted language from page 26, lines 10-15 of the specification, averring that the excerpted language defines "alkyl" (it does not, alkyl is defined at page 27, lines 19-25). The Examiner further avers that the excerpted language indicates that the "R_1 group, as defined, could have a benzyl substitution." The Examiner thus concludes that the

R_1 group recited in Claim 3 is defined to include "optionally substituted" alkyl, resulting (per the Examiner's averment) in the claim reading on benzyl. Applicants respectfully traverse all of these averments and conclusions.

Applicants note that the Examiner has deleted the first three words of the first excerpted sentence of page 26, line 10, which read "As indicated above". These seemingly trivial deleted words have the effect of rendering the following language properly interpretable as applying only to those R_1 groups recited as being "optionally substituted" prior to page 26, line 10 (note that the claims begin at page 166 of the application). Furthermore, and most importantly, regardless of the location of the claims in the application, the Examiner's interpretation of claims 3-8 requires an improper importation of disclosure from specific embodiments recited in the specification (e.g., Formula I and Formula Ia) into rejected claims 3-8, which nowhere call for optional substitution.

The Office Action's application of the definition of optionally substituted to the determination of the scope of independent claim 3 constitutes an unreasonable interpretation of the claim language in view of the plain meaning of claim 3 and the clear definition of alkyl provided by the specification at page 26. See, MPEP 2111.01 and MPEP 2145, Section VI.

Thus, for at least the reasons presented herein, independent claim 3 provides compounds in which R_1 is selected from a Markush group which does not include benzyl. Therefore claim 3 is patentable over Hori. Claims 4-8 depend from claim 3 and are therefore also patentable over Hori.

Claims 3-5, 7, and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by McCapra, et al. Chem. Abstract 79:125387 (which corresponds to *Journal of the Chemical Society, Chemical Communications*, (1973), 14, 467-468).

Claims 3-5, 7, and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Inoue, et al., Chem. Abstract 93:114448 (which corresponds to *Chemistry Letters*, (1980), 3, 299-300).

Claims 3-5, 7, and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Teranishi, et al., Chem. 114:101506 (which corresponds to *Bulletin of the Chemical Society of Japan,* (1990), 63(11), 3132-3140).

Each of the rejections are traversed.

As the Chem. Abstract print out for the McCapra, Inoue, and Teranishi documents is understood, each of the references recite pyrazine compounds having a benzyl residue at the R_1 position. As discussed *supra* in connection with Hori, the claims as presently amended, do not encompass compounds in which R_1 is benzyl or other aralkyl, in part because the plain meaning of the claims does not encompass substituted alkyl groups at the R_1 position.

Thus, none of McCapra, Inoue, and Teranishi disclose or suggest the pyrazine compounds recited by claim 3 or claim 9. Thus, claim 3 and claim 9 are patentable over McCapra, Inoue, and/or Teranishi. Claims 4-5, and 7 depend from claim 3 and are therefore also patentable over McCapra, Inoue, and/or Teranishi.

Applicants respectfully request reconsideration of claims 16-26, 30, 42-130, 133-146, 154, 155, and 162. None of the prior art relied upon by the Examiner reads upon any of claims 3-8, as previously presented. As provided by MPEP 803.02, reexamination of the amended Markush-type claim is proper after the claims have been amended to exclude species of a Markush group which is anticipated or rendered obvious by the prior art.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

Applicants believe that additional fees are not required for consideration of the within Amendment. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

Date: May 3, 2004 By: _____

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